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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEFFREY THOMAS KREULEN
and WILLIAM SCOTT SPANGLER

Appeal 2007-3786
Application 09/629,831¹
Technology Center 2100

Decided: May 14, 2008

Before: JAY P. LUCAS, ST. JOHN COURTENAY III, and STEPHEN C.
SIU, *Administrative Patent Judges.*

LUCAS, *Administrative Patent Judge.*

DECISION ON APPEAL

¹ Application filed July 31, 2000. The real party in interest is International Business Machines Corp.

STATEMENT OF CASE

Appellants appeal from a final rejection of claims 1 to 17 under authority of 35 U.S.C. § 134. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to a method for creating a dictionary of the terms of a document in an efficient manner. In the words of the Appellants:

It is, therefore, an object of the present invention to provide a structure and method for automatically creating a dictionary for clustering text documents, including performing a first pass for each of the documents to determine a frequency of each word in each of the documents, creating a Hashtable of most frequently occurring words in the documents, performing a second pass for each of the documents to determine a frequency of phrases in each of the documents that contain only words in the Hashtable and adding the most frequently occurring phrases to the Hashtable, and outputting the most frequently occurring words and the most frequently occurring phrases as the dictionary. The determination of the frequency of each word can include removing punctuation and case from the documents, removing stop words from the document, replacing words in the documents with synonyms, removing duplicate words from the documents, adding remaining words to the Hashtable, determining the frequency of each word remaining in the Hashtable, and removing words below a frequency level from the Hashtable.

(Specification, page 2)

Claim 1 is exemplary:

1. A method of automatically creating a dictionary for clustering text documents comprising:

inputting a maximum dictionary size;

determining a frequency of each word in each of said documents;

creating a dictionary of most frequently occurring words in said documents as limited by said maximum dictionary size, such that said dictionary contains less than all words in said documents;

after creating said dictionary, determining a frequency of phrases in each of said documents that contain only words in said dictionary;

adding most frequently occurring phrases to said dictionary; and

outputting said most frequently occurring words and said most frequently occurring phrases as said dictionary, wherein said dictionary size limits the number of words and phrases maintained in said dictionary.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

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| Kostoff | US 5,440,481 | Aug. 8, 1995 |
| Kobayashi | US 5,742,834 | Apr. 21, 1998 |
| Kirsch | US 6,070,158 | May 30, 2000 |
| Turney | US 6,470,307 B1 | Oct. 22, 2002 |

Rejections:

R1: Claims 1, 6 and 11 stand rejected under 35 U.S.C. § 103(a) for being obvious over Kostoff.

R2: Claims 2 to 5, 7 to 10 and 12 to 17 stand rejected under 35 U.S.C. § 103(a) for being obvious over Kostoff in view of Kirsch, Kobayashi and Turney.

Appellants contend that the claimed subject matter is not rendered obvious by Kostoff alone, or in combination with Kirsch, Kobayashi and Turney for failure of the reference(s) to teach the claimed limitations. The Examiner contends that each of the claims is properly rejected.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in this opinion. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).²

We reverse the rejections.

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 103(a). The issue turns on whether Kostoff teaches the limitation of “inputting a maximum dictionary size” and “wherein said dictionary size limits the number of words and phrases maintained in said dictionary.”

² Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group, except as will be noted in this opinion. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991).

FINDINGS OF FACTS

The record supports the following findings of facts (FF) by a preponderance of the evidence.

1. Appellants have invented a method for creating a dictionary of the terms in a document. (Spec, p. 2, l. 5). In this context, a dictionary is a list of the important words and phrases in a document used for automated document classification or quick understanding of the subject matter of the document. (Spec, p. 1, l. 10). A key feature of the independent claims is the ability of the user to specify a maximum dictionary size which limits the total number of phrases that will be returned. (Spec, p. 4, ll. 8 to 9).
2. The patent to Kostoff presents a method and system for compiling a database of the words and phrases in a set of documents. (Col. 3, l. 23). The steps include assembling the documents that will be analyzed into a full text database. (Col. 4, ll. 13 to 14). The user then makes a list of “trivial phrases” such as “it, to, if and but, etc. that the user wishes to have excluded from the database” and that list is used to eliminate those words and phrases. (Col 4, ll. 38 to 41). Thereafter the system presents related words and phrases organized by “pervasive theme areas” (PTAs) to the user, for selection of the phrases that the user desired to have included in the dictionary. (Col. 4, l. 65 to col. 5, l. 65).

PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

"In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

"What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *Id.* at 1740.

ANALYSIS

From our review of the administrative record, we find that the Examiner has presented a prima facie case for the rejections of Appellants' claims under 35 U.S.C. § 103(a). The prima facie case is presented on pages 3 to 15 of the Examiner's Answer.

In opposition, Appellants present two main arguments, applied to both rejections. The one argument is dispositive of the appeal. Specifically, Appellants argue that Kostoff does not teach “inputting a maximum dictionary size” (Br. p. 18, bottom) or “creating a dictionary of most frequently occurring words in said documents as limited by said ‘maximum dictionary size’” (Br. p. 20, bottom).

The Examiner responds by pointing to two sections of Kostoff that he contends teach or suggest limiting the dictionary size, as claimed. (Ans., p. 15, middle). First, in column 5, line 1 to column 6, line 64, Kostoff teaches the user selecting the preliminary set of phrases to be included in the dictionary. The Examiner argues that by selecting some phrases, and rejecting others, the method inputs a maximum dictionary size. We cannot agree. The disclosed Kostoff selection method is an act of inclusion, where the user specifies which PTAs and which phrases are to be put in the dictionary. There is no limit on the number of PTAs or phrases imposed either by the system or artificially by the rules under which the user is operating. We do not feel that this suggests to the person of ordinary skill in the art that it would be obvious for the method to build the dictionary to an inputted maximum dictionary size.

The Examiner next points to Kostoff, column 4 lines 39 to 49, in which a memory limitation is expressed. (Ans., p. 15, bottom). A closer reading of this memory limitation indicates that the teaching is indeed inapposite: “[i]n the preferred embodiment the number of trivial phrases that can be selected is unlimited except for the limitations imposed by computer

memory size.” The context is the listing of the “trivial phrases” mentioned above (FF #2). The patent is indicating that there is no limit to the number of these phrases that are allowed, except the computer’s memory complement. We do not find this to suggest “inputting a maximum dictionary size” as claimed.

This teaching in Kostoff is relied upon in the rejection of each of the independent and dependent claims.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner erred in rejecting claims 1 to 17.

DECISION

The Examiner's rejections of claims 1 to 17 are reversed.

REVERSED

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